

REMARKS

The present application includes claims 139-167, 188, 190-198, 203-205, 235-251, 262-263, 265-278 and 280-299. Claims 280-299 are new. Claims 139, 144, 145, 150-160, 162-165, 188, 204-205, 235, 243, 251 and 262, were amended.

The claims were subject to a telephonic provisional election. Applicants acknowledge the election of group I including claims 139-167, 188-198, 203-205, 235-251 and 262-279, without traverse. The remaining claims were cancelled. In addition, claims 189 and 264 were cancelled, since their requirements were incorporated in parent claims. Claim 279 was also cancelled following the Examiner's request.

The Examiner requested correction of claims 204-205, 251 and 265. The claims were corrected except for claim 265, regarding which applicants disagree with the Examiner and state that the language of the claim is suitable.

Claims 139, 142-143, 145-150, 157-161 and 166-167 stand rejected under 35 U.S.C. 102(b) as being anticipated by Carroll et al. (U.S. patent 5,517,194).

Claims 139-141, 143-144 and 162-165 stand rejected under 35 U.S.C. 102(e) as being anticipated by Yokota et al. (U.S. patent 5,914,980).

Claims 139 and 150-153 stand rejected under 35 U.S.C. 102(b) as being anticipated by Gunnarsson (U.S. patent 5,552,790).

Claims 154-156 stand rejected under 35 U.S.C. 103(a) as being unpatentable in view of Gunnarsson (U.S. patent 5,552,790).

Claim 277 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Gunnarsson (U.S. patent 5,552,790) in view of Rodal et al. (U.S. patent 5,467,095).

Claim 278 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Gunnarsson (U.S. patent 5,552,790) in view of Cole et al. (U.S. patent 5,523,749).

Claim 139 was amended to require a low frequency circuit for handling information modulated on an acoustic carrier frequency. This requirement was taken from claim 144, which was amended to depend on claim 154. In rejecting claim 144, the Examiner stated that radio communications are an example of communications of an acoustic antenna. Applicants respectfully submit that radio communications are performed using electrical fields which are independent of an interfacing substance, while acoustic communications use acoustic fields which cannot propagate in vacuum. To applicants' best understanding, the antenna of Yokota cannot be

used for acoustic signals. But even if the antenna could be used for acoustic signals, Yokota does not teach or suggest a circuit for transmitting acoustic signals, as required by claim 139. Applicants note, that also Gunnarsson and Carroll relate to electrical fields and not acoustic fields.

The dependent claims are allowable at least because of their parent claim.

Claim 154 was converted into independent form. Claim 154 is similar to old claim 139 but requires that the carrier frequency is between 5-30 kHz. In addition, as with claim 139, the claim was clarified to use the more accurate term of carrier frequency instead of "modulation frequency".

A low carrier frequency up to 30KHz is not taught or suggested by any of the references cited by the Examiner.

Specifically, Gunnarsson relates to microwave transmissions (col. 1, lines 31-34) with carrier frequencies of 2.4 GHz and above (col. 2, lines 64-67). The low frequency of 32.8 kHz referred to by the Examiner (col. 6, lines 25-26) relates to switching of the microwave impedance and not to the carrier frequency (col. 6, lines 27-37).

Yokota relates to a 200kHz carrier frequency (col. 8, lines 17-18) for transmission from the reader 300 to the card 400 and a 100 KHz carrier frequency for transmission from the card 400 to the reader 300 (col. 11, lines 4-8). Yokota further states that the band of several 100 KHz is advantageous. Therefore, a reader of Yokota would not contemplate using lower frequency ranges for the carrier frequency.

Carroll suggests a slightly lower frequency than Yokota, going down to 125 kHz for transmission to the card and half that frequency, 62.5 kHz, for transmission from the card (Fig. 3, col. 7, lines 40-50).

While Carroll and Yokota have identified the advantages of using frequencies in the range of hundreds of KHz for transmission to the card, and a fraction of that frequency, as low as 40 KHz (Carroll, col. 2, lines 7-9) for transmission from the card, the cited references were aware of the advantages of higher frequencies (for example, Gunnarsson, col. 1, lines 31-34) and therefore, to the best of applicants' knowledge did not go below the frequencies discussed above. In the present application, the advantages of using frequencies easily generated by sound cards were identified and therefore use of frequencies below 30KHz was suggested (pages 15-16). Accordingly, it would not be obvious to those skilled in the art at the time the present application was filed, to use lower frequencies beyond those suggested by the art.

New claim 283 is a version of old claim 139 that was amended to use the term carrier frequency rather than "modulation frequency" and to incorporate the requirement of claim 161, which requires a piezoelectric antenna. Claim 161 was rejected based on Carroll, col. 12, lines 1-, with the explanation "having RF+ terminal and RF- terminal, which transmitting power/voltage signals". Applicants respectfully traverse the rejection and state that the Examiner has not established a *prima facie* rejection, as the Examiner has not shown a smart card with a piezoelectric antenna. Applicants submit that in dictionary.com the following definition of piezoelectric appears:

"The generation of electricity or of electric polarity in dielectric crystals subjected to mechanical stress, or the generation of stress in such crystals subjected to an applied voltage."

According to this definition, Carroll does not teach or suggest using a piezoelectric antenna. In an electronic search through the text of Carroll, none of the terms piezoelectric, crystal and mechanical were found.

New claim 288 is a version of old claim 139 that was amended to use the term carrier frequency rather than "modulation frequency" and to incorporate the requirement of claim 162, which requires an additional high-frequency circuit of a carrier frequency above 100kHz.

Claim 163 was rejected based on Yokota. Applicants respectfully traverse the rejection and state that the Examiner has not established a *prima facie* rejection, as the Examiner has not shown a smart card with both a low frequency circuit and a high frequency circuit.

New claim 293 is a version of old claim 139 that was amended to use the term carrier frequency rather than "modulation frequency" and to additionally require that the low frequency circuit is for handling information transmitted to the receiving antenna. As noted above, in all the cited art the frequency below 116-125 KHz is transmitted by the smart card and not to the smart card. The use of lower frequencies is not obvious since it imposes additional requirements on the smart card.

Claims 188-189 stand rejected under 35 U.S.C. 102(b) as being anticipated by Nitta (US 4,851,654).

Claim 188 was amended to clarify the claim and incorporate the limitation of claim 189 therein. Accordingly, claim 189 was cancelled.

Claim 188 as amended requires an external acoustic communication link circuit for demodulating information from sound or speech signals received by an acoustic signal reception element of the smart card. In Nitta, in contrast, microphone 9 is used to receive speech signals, but

not modulated sound signals. Column 3, lines 8-34, referred to by the Examiner, relate to RF transmissions and not transmission of modulated acoustic signals.

Claims 190-198 stand rejected under 35 U.S.C. 102(b) as being anticipated by Nerlikar (US 5,629,981).

Applicants respectfully traverse the rejection and state that the Examiner has not established a *prima facie* case of anticipation regarding claim 190, since the Examiner has not shown a smart card having a biometric data acquisition circuit, sharing an input transducer with a communication link.

In Nerlinkar, the communication link uses an RF read/writer transponder 304 (col. 7, line 13), which is not used in any way for biometric data acquisition.

The dependent claims add further patentability over Nerlinkar. Claim 191, for example, requires an acoustic communication link. Applicants take notice that an acoustic communication link is a link which uses acoustic waves. Nerlinkar only suggests an RF link, which is not an acoustic link.

Claim 193, for example, requires a motion determination circuit, which is not taught or suggested by Nerlinkar. Claim 196, for example, requires a processor for evaluating said biometric data against a sample of biometric data. In Nerlinkar, the smart card does not include a processor. The comparison of biometric information is performed, to applicants best understanding of Nerlinkar, by the equipment/facility segment and not by the user ID badge.

Claims 203-205 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Nerlikar (US 5,629,981) in view of Mainguet (US patent 6,289,114) and for claim 204 an additional reference.

Applicants respectfully traverse the rejection and state that the Examiner has not established a *prima facie* rejection, as Mainguet teaches away from being placed on a smart card in that it includes external connection pins 13 (col. 4, lines 1-3).

Claims 235-242 stand rejected under 35 U.S.C. 102(b) as being anticipated by Yokoyoma (US patent 4,942,534).

Claim 235 was amended to require that the second separable part is flexible. Support for this amendment is found in Fig. 3F and on page 24, lines 31-34: "Possibly, the badge holder includes circuitry for receiving and transforming transmitted power, such as RF, light, ultrasound or LF magnetic fields, or local power, such as inertial motion of flexing of the card, into power for

recharging the card, shown generally as reference 116." In contrast, in Yokoyama, as can be appreciated from Figs. 2A, 2B and 7, the interface unit is not flexible.

At least some of the dependent claims add further patentability over Yokoyama. New claim 296, for example, requires that the second part be in the form of a badge holder, a feature not taught or suggested by Yokoyama. Claim 297, for example, requires that the second part allow a clear field of view of the first part. This is not taught or suggested by Yokoyama.

Claims 243-251 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Moon (US 6,211,858) in view of Prasad (US 6,237,026).

Claim 243 was amended to require a flat card having a thickness about the thickness of a credit card. The device of Moon is much thicker, and belongs to a totally different field from the field of smart cards.

Claims 262-267 stand rejected under 35 U.S.C. 102(b) or 103(a) as being unpatentable over Pitroda (US 5,884,271) alone, or in view of Blinn (US 6,058,373).

Applicant amended claim 262 to include the limitation of claim 264 and cancelled claim 264. Applicants traverse the rejection regarding claim 262 (which was claim 264) and state that the Examiner has not established a *prima facie* case of unpatentability regarding amended claim 262, since the Examiner did not show at least one element of claim 262 in either of the references cited.

Claim 262, as amended, requires a smart card with an acoustic display that sounds pertinent information regarding a transaction, retrieved via a link from a computer. Neither Pitroda nor Blinn teaches or suggests such an acoustic display. Column 9, lines 55-60, of Blinn, to which the Examiner related, merely states that the Internet is used to present text, audio and video. Blinn does not teach or suggest sounding pertinent information regarding a transaction. Even if Blinn would suggest a web site sounding transaction information, it would not be obvious to have a smart card which is designed to sound transaction information, at least because smart cards have a limited size relative to computers used as browsers.

The dependent claims are allowable at least because they depend on an allowable claim.

Claims 268-276 stand rejected under 35 U.S.C. 102(b) or 103(a) as being unpatentable over Pavlov (US 4,614,861) alone, or in view of Kelsey (US 5,907,142).


Applicants respectfully traverse the rejection and state that the Examiner has not established a *prima facie* case of unpatentability regarding claim 268, since the Examiner did not show a controllable pattern display having at least two states, a first state indicating that the smart

card is valid and a second state indicating the smart card is invalid.

Applicants note that the term invalid refers to a smart card that cannot be used by the holder of the card without refurbishment, as explained in length on page 44 of the present application, and not to a card which is temporarily in an inactive state. Accordingly, neither of Pavlov and Kesley teaches or suggests the requirements of claim 268.

In view of the above remarks, applicant submits that the claims are patentable over the prior art. Allowance of the application is respectfully awaited. If, however, the Examiner is not convinced and the Examiner is of the opinion that a telephone conversation may forward the present application toward allowance, applicant respectfully requests that the Examiner call the undersigned at 1 (877) 428-5468. Please note that this is a direct *toll free* number in the US that is answered in the undersigned's Israel office. Israel is 7 hours ahead of Washington.

Respectfully submitted,
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February 2, 2005
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